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Turner, C. Alexander Jr.

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Ala	Val	Tyr	Phe	Lys	Ile	Asn	Pro	Arg	Ser	Gly	Leu	Ile	Val	Thr	Ala	420	425	430
Arg	Pro	Leu	Asn	Thr	Val	Lys	Lys	Glu	Val	Tyr	Lys	Leu	Glu	Val	Thr	435	440	445
Asn	Lys	Glu	Gly	Asp	Leu	Lys	Ala	Gln	Val	Thr	Ile	Ser	Ile	Glu	Asp	450	455	460
Ala	Asn	Asp	His	Thr	Pro	Glu	Phe	Gln	Gln	Pro	Leu	Tyr	Asp	Ala	Tyr	465	470	475
Val	Asn	Glu	Ser	Val	Pro	Val	Gly	Thr	Ser	Val	Leu	Thr	Val	Ser	Ala	485	490	495
Ser	Asp	Lys	Asp	Lys	Gly	Glu	Asn	Gly	Tyr	Ile	Thr	Tyr	Ser	Ile	Ala	500	505	510
Ser	Leu	Asn	Leu	Leu	Pro	Phe	Val	Ile	Asn	Gln	Phe	Thr	Gly	Val	Ile	515	520	525
Ser	Thr	Thr	Glu	Glu	Leu	Asp	Phe	Glu	Ser	Ser	Pro	Glu	Ile	Tyr	Arg	530	535	540
Phe	Ile	Val	Arg	Ala	Ser	Asp	Trp	Gly	Ser	Pro	Tyr	Arg	His	Glu	Ser	545	550	555
Glu	Val	Asn	Val	Thr	Ile	Arg	Ile	Gly	Asn	Val	Asn	Asp	Asn	Ser	Pro	565	570	575

Leu	Phe	Glu	Lys	Val	Ala	Cys	Gln	Gly	Val	Ile	Ser	Tyr	Asp	Phe	Pro
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Val	Gly	Gly	His	Ile	Thr	Ala	Val	Ser	Ala	Ile	Asp	Ile	Asp	Glu	Leu
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Glu	Leu	Val	Lys	Tyr	Lys	Ile	Ile	Ser	Gly	Asn	Glu	Leu	Gly	Phe	Phe
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Tyr	Leu	Asn	Pro	Asp	Ser	Gly	Val	Leu	Gln	Leu	Lys	Lys	Ser	Leu	Thr
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Gln	Gly	Pro	Tyr	Phe	Asp	Lys	Ser	Phe	Pro	Ser	Asp	Val	Ala	Val	Lys
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Glu	Asp	Leu	Pro	Val	Gly	Ala	Asn	Ile	Leu	Lys	Ile	Lys	Ala	Tyr	Asp
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Ala	Asp	Ser	Gly	Phe	Asn	Gly	Lys	Val	Leu	Phe	Thr	Ile	Ser	Asp	Gly
		755				760						765			
Asn	Thr	Asp	Ser	Cys	Phe	Asn	Ile	Asp	Met	Glu	Thr	Gly	Gln	Leu	Lys
	770				775						780				
Val	Leu	Met	Pro	Met	Asp	Arg	Glu	His	Thr	Asp	Leu	Tyr	Leu	Leu	Asn
785				790						795					800
Ile	Thr	Ile	Tyr	Asp	Leu	Gly	Asn	Pro	Gln	Lys	Ser	Ser	Trp	Arg	Leu
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Leu	Thr	Ile	Asn	Val	Glu	Asp	Ala	Asn	Asp	Asn	Ser	Pro	Val	Phe	Ile
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Gln	Asp	Ser	Tyr	Ser	Val	Asn	Ile	Leu	Glu	Ser	Ser	Gly	Ile	Gly	Thr
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Glu	Ile	Ile	Gln	Val	Glu	Ala	Arg	Asp	Lys	Asp	Leu	Gly	Ser	Asn	Gly
	850					855					860				
Glu	Val	Thr	Tyr	Ser	Val	Leu	Thr	Asp	Thr	Gln	Gln	Phe	Ala	Ile	Asn
865				870						875					880
Ser	Ser	Thr	Gly	Ile	Val	Tyr	Val	Ala	Asp	Gln	Leu	Asp	Arg	Glu	Ser
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Lys	Ala	Asn	Tyr	Ser	Leu	Lys	Ile	Glu	Ala	Arg	Asp	Lys	Ala	Glu	Ser
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Gly	Gln	Gln	Leu	Phe	Ser	Val	Val	Thr	Leu	Lys	Val	Phe	Leu	Asp	Asp
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Val	As														

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Asn	Ser	Pro	Leu	Val	Ile	Arg	Ala	Thr	Asp	Ala	Asp	Ser	Asn	Arg	Asn
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Ala	Leu	Leu	Val	Tyr	Gln	Ile	Val	Glu	Ser	Thr	Ala	Lys	Lys	Phe	Phe
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Val	Thr	Tyr	Ser	Leu	His	Ser	Asp	Ser	Gln	Pro	Glu	Lys	Val	Met	Glu	2850	2855	2860
Ala	Phe	Asn	Ile	Asp	Ser	Asn	Thr	Gly	Trp	Ile	Ser	Thr	Leu	Lys	Asp	2865	2870	2875
Leu	Asp	His	Glu	Thr	Asp	Pro	Thr	Phe	Thr	Phe	Ser	Val	Val	Ala	Ser	2885	2890	2895
Asp	Leu	Gly	Glu	Ala	Phe	Ser	Leu	Ser	Ser	Thr	Ala	Leu	Val	Ser	Val	2900	2905	2910
Arg	Val	Thr	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Val	Phe	Ala	Gln	Glu	Val	2915	2920	2925
Tyr	Arg	Gly	Asn	Val	Lys	Glu	Ser	Asp	Pro	Pro	Gly	Glu	Val	Val	Ala	2930	2935	2940
Val	Leu	Ser	Thr	Trp	Asp	Arg	Asp	Thr	Ser	Asp	Val	Asn	Arg	Gln	Val	2945	2950	2955
Ser	Tyr	His	Ile	Thr	Gly	Gly	Asn	Pro	Arg	Gly	Arg	Phe	Ala	Leu	Gly	2965	2970	2975
Leu	Val	Gln	Ser	Glu	Trp	Lys	Val	Tyr	Val	Lys	Arg	Pro	Leu	Asp	Arg	2980	2985	2990
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Asp	Ile	Pro	Ser	Asn	Lys	Ile	Ile	Leu	Lys	Val	Ser	Ala	Lys	Asp	Ala	3045	3050	3055
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Leu	Thr	Ile	Asn	Val	Glu	Asp	Ala	Asn	Asp	Asn	Ser	Pro	Val	Phe	Ile					
			820					825					830							
Gln	Asp	Ser	Tyr	Ser	Val	Asn	Ile	Leu	Glu	Ser	Ser	Gly	Ile	Gly	Thr					
	835					840						845								
Glu	Ile	Ile	Gln	Val	Glu	Ala	Arg	Asp	Lys	Asp	Leu	Gly	Ser	Asn	Gly					
	850				855						860									
Glu	Val	Thr	Tyr	Ser	Val	Leu	Thr	Asp	Thr	Gln	Gln	Phe	Ala	Ile	Asn					
865					870					875				880						
Ser	Ser	Thr	Gly	Ile	Val	Tyr	Val	Ala	Asp	Gln	Leu	Asp	Arg							

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Pro Tyr Phe Pro	Asp Phe Ala Val Val	Gly Ser Val Lys Glu Asn Ser				
	1045	1050		1055		
Arg Ile Gly Thr	Ser Val Leu Gln Val Thr Ala Arg Asp Glu Asp Ser					
	1060	1065		1070		
Gly Arg Asp Gly	Glu Ile Gln Tyr Ser Ile Arg Asp Gly Ser Gly Leu					
	1075	1080		1085		
Gly Arg Phe Ser	Ile Asp Asp Glu Ser Gly Val Ile Thr Ala Ala Asp					
	1090	1095		1100		
Ile Leu Asp Arg	Glu Thr Met Gly Ser Tyr Trp Leu Thr Val Tyr Ala					
1105	1110	1115		1120		
Thr Asp Arg Gly	Val Val Pro Leu Tyr Ser Thr Ile Glu Val Tyr Ile					
	1125	1130		1135		
Glu Val Glu Asp	Val Asn Asp Asn Ala Pro Leu Thr Ser Glu Pro Ile					
	1140	1145		1150		
Tyr Tyr Pro Val	Val Met Glu Asn Ser Pro Lys Asp Val Ser Val Ile					
	1155	1160		1165		
Gln Ile Gln Ala	Glu Asp Pro Asp Ser Ser Ser Asn Glu Lys Leu Thr					
1170	1175	1180				
Tyr Arg Ile Thr	Ser Gly Asn Pro Gln Asn Phe Phe Ala Ile Asn Ile					
1185	1190	1195		1200		
Lys Thr Gly Leu	Ile Thr Thr Thr Ser Arg Lys Leu Asp Arg Glu Gln					
	1205	1210		1215		
Gln Ala Glu His	Phe Leu Glu Val Thr Val Thr Asp Gly Gly Pro Ser					
	1220	1225		1230		
Pro Lys Gln Ser	Thr Ile Trp Val Val Val Gln Val Leu Asp Glu Asn					
	1235	1240		1245		
Asp Asn Lys Pro	Gln Phe Pro Glu Lys Val Tyr Gln Ile Lys Leu Pro					
	1250	1255		1260		
Glu Arg Asp Arg	Lys Lys Arg Gly Glu Pro Ile Tyr Arg Ala Phe Ala					
1265	1270	1275		1280		
Phe Asp Arg Asp	Glu Gly Pro Asn Ala Glu Ile Ser Tyr Ser Ile Val					
	1285	1290		1295		
Asp Gly Asn Asp	Asp Gly Lys Phe Phe Ile Asp Pro Lys Thr Gly Met					
	1300	1305		1310		
Val Ser Ser Arg	Lys Gln Phe Thr Ala Gly Ser Tyr Asp Ile Leu Thr					
	1315	1320		1325		
Ile Lys Ala Val	Asp Asn Gly Arg Pro Gln Lys Ser Ser Thr Ala Arg					
	1330	1335		1340		
Leu His Ile Glu	Trp Ile Lys Lys Pro Pro Pro Ser Pro Ile Pro Leu					
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Thr Phe Asp Glu	Pro Phe Tyr Asn Phe Thr Val Met Glu Ser Asp Arg					
	1365	1370		1375		
Val Thr Glu Ile	Val Gly Val Val Ser Val Gln Pro Ala Asn Thr Pro					
	1380	1385		1390		
Leu Trp Phe Asp	Ile Val Gly Gly Asn Phe Asp Ser Ala Phe Asp Ala					
	1395	1400		1405		
Glu Lys Gly Val	Gly Thr Ile Val Ile Ala Lys Pro Leu Asp Ala Glu					
	1410	1415		1420		
Gln Arg Ser Ile	Tyr Asn Met Ser Val Glu Val Thr Asp Gly Thr Asn					
1425	1430	1435		1440		
Val Ala Val Thr	Gln Val Phe Ile Lys Val Leu Asp Asn Asn Asp Asn					
	1445	1450		1455		
Gly Pro Glu Phe	Ser Gln Pro Asn Tyr Asp Val Thr Ile Ser Glu Asp					
	1460	1465		1470		
Val Leu Pro Asp	Thr Glu Ile Leu Gln Ile Glu Ala Thr Asp Arg Asp					

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Glu Lys His Lys Leu Ser Tyr Thr Val His Ser Ser Ile Asp Ser Ile		
1490	1495	1500
Ser Met Arg Lys Phe Arg Ile Asp Pro Ser Thr Gly Val Leu Tyr Thr		
1505	1510	1515
Ala Glu Arg Leu Asp His Glu Ala Gln Asp Lys His Ile Leu Asn Ile		1520
1525	1530	1535
Met Val Arg Asp Gln Glu Phe Pro Tyr Arg Arg Asn Leu Ala Arg Val		
1540	1545	1550
Ile Val Asn Val Glu Asp Ala Asn Asp His Ser Pro Tyr Phe Thr Asn		
1555	1560	1565
Pro Leu Tyr Glu Ala Ser Val Phe Glu Ser Ala Ala Leu Gly Ser Ala		
1570	1575	1580
Val Leu Gln Val Thr Ala Leu Asp Lys Asp Lys Gly Glu Asn Ala Glu		
1585	1590	1595
Leu Ile Tyr Thr Ile Glu Ala Gly Asn Thr Gly Asn Met Phe Lys Ile		1600
1605	1610	1615
Glu Pro Val Leu Gly Ile Ile Thr Ile Cys Lys Glu Pro Asp Met Thr		
1620	1625	1630
Thr Met Gly Gln Phe Val Leu Ser Ile Lys Val Thr Asp Gln Gly Ser		
1635	1640	1645
Pro Pro Met Ser Ala Thr Ala Ile Val Arg Ile Ser Val Thr Met Ser		
1650	1655	1660
Asp Asn Ser His Pro Lys Phe Ile His Lys Asp Tyr Gln Ala Glu Val		
1665	1670	1675
Asn Glu Asn Val Asp Ile Gly Thr Ser Val Ile Leu Ile Ser Ala Ile		1680
1685	1690	1695
Ser Gln Ser Thr Leu Ile Tyr Glu Val Lys Asp Gly Asp Ile Asn Gly		
1700	1705	1710
Ile Phe Thr Ile Asn Pro Tyr Ser Gly Val Ile Thr Thr Gln Lys Ala		
1715	1720	1725
Leu Asp Tyr Glu Arg Thr Ser Ser Tyr Gln Leu Ile Ile Gln Ala Thr		
1730	1735	1740
Asn Met Ala Gly Met Ala Ser Asn Ala Thr Val Asn Ile Gln Ile Val		
1745	1750	1755
Asp Glu Asn Asp Asn Ala Pro Val Phe Leu Phe Ser Gln Tyr Ser Gly		1760
1765	1770	1775
Ser Leu Ser Glu Ala Ala Pro Ile Asn Ser Ile Val Arg Ser Leu Asp		
1780	1785	1790
Asn Ser Pro Leu Val Ile Arg Ala Thr Asp Ala Asp Ser Asn Arg Asn		
1795	1800	1805
Ala Leu Leu Val Tyr Gln Ile Val Glu Ser Thr Ala Lys Lys Phe Phe		
1810	1815	1820
Thr Val Asp Ser Ser Thr Gly Ala Ile Arg Thr Ile Ala Asn Leu Asp		
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His Glu Thr Ile Ala His Phe His Phe His Val His Val Arg Asp Ser		1840
1845	1850	1855
Gly Ser Pro Gln Leu Thr Ala Glu Ser Pro Val Glu Val Asn Ile Glu		
1860	1865	1870
Val Thr Asp Val Asn Asp Asn Pro Pro Val Phe Thr Gln Ala Val Phe		
1875	1880	1885
Glu Thr Ile Leu Leu Leu Pro Thr Tyr Val Gly Val Glu Val Leu Lys		
1890	1895	1900
Val Ser Ala Thr Asp Pro Asp Ser Glu Val Pro Pro Glu Leu Thr Tyr		
1905	1910	1915
Ser Leu Met Glu Gly Ser Leu Asp His Phe Leu Ile Asp Ser Asn Ser		1920

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Gly	Val	Leu	Thr	Ile	Lys	Asn	Asn	Asn	Leu	Ser	Lys	Asp	His	Tyr	Met
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Leu	Ile	Val	Lys	Val	Ser	Asp	Gly	Lys	Phe	Tyr	Ser	Thr	Ser	Met	Val
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Thr	Ile	Met	Val	Lys	Glu	Ala	Met	Asp	Ser	Gly	Leu	His	Phe	Thr	Gln
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Ser	Phe	Tyr	Ser	Thr	Ser	Ile	Ser	Glu	Asn	Asn	Thr	Asn	Ile	Thr	Lys
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Val	Ala	Ile	Val	Asn	Ala	Val	Gly	Asn	Arg	Leu	Asn	Glu	Pro	Leu	Lys
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Tyr	Ser	Ile	Leu	Asn	Pro	Gly	Asn	Lys	Phe	Lys	Ile	Lys	Ser	Thr	Ser
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Gly	Val	Ile	Gln	Thr	Thr	Gly	Val	Pro	Phe	Asp	Arg	Glu	Glu	Gln	Glu
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Leu	Tyr	Glu	Leu	Val	Val	Glu	Ala	Ser	Arg	Glu	Leu	Asp	His	Leu	Arg
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Val	Ala	Arg	Val	Val	Val	Arg	Val	Asn	Ile	Glu	Asp	Ile	Asn	Asp	Asn
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Ser	Pro	Val	Phe	Val	Gly	Leu	Pro	Tyr	Tyr	Ala	Ala	Val	Gln	Val	Asp
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Ala	Glu	Pro	Gly	Thr	Leu	Ile	Tyr	Gln	Val	Thr	Ala	Ile	Asp	Lys	Asp
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Lys	Gly	Pro	Asn	Gly	Glu	Val	Thr	Tyr	Val	Leu	Gln	Asp	Asp	Tyr	Gly
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Thr	Ile	Val	Asn	Lys	Ala	Met	Pro	Val	Phe	Asp	Lys	Pro	Phe	Tyr	Thr
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Asn	Ala	Thr	Ser	Pro	Glu	Gly	Gln	Gly	Ile	Ile	Tyr	Ile	Ile	Ile	Asp
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Met	Val	His	Tyr	Gln	Ile	Val	Gln	Asp	Thr	Tyr	Asn	Ser	Thr	Asp	Tyr
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Phe	His	Ile	Asp	Ser	Ser	Ser	Gly	Leu	Ile	Leu	Thr	Ala	Arg	Met	Leu
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Asp	His	Glu	Leu	Val	Gln	His	Cys	Thr	Leu	Lys	Val	Arg	Ser	Ile	Asp
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Ser	Gly	Phe	Pro	Ser	Leu	Ser	Ser	Glu	Val	Leu	Val	His	Ile	Tyr	Ile

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Ser Asp Val Asn Asp Asn Pro Pro Val Phe Asn Gln Leu Ile Tyr Glu		
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Ser Tyr Val Ser Glu Leu Ala Pro Arg Gly His Phe Val Thr Cys Val		2400
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Gln Ala Ser Asp Ala Asp Ser Ser Asp Phe Asp Arg Leu Glu Tyr Ser		2415
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Ile Leu Ser Gly Asn Asp Arg Thr Ser Phe Leu Met Asp Ser Lys Ser		2430
	2435	2440
Gly Val Ile Thr Leu Ser Asn His Arg Lys Gln Arg Met Glu Pro Leu		2445
	2450	2455
Tyr Ser Leu Asn Val Ser Val Ser Asp Gly Leu Phe Thr Ser Thr Ala		2460
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Gln Val His Ile Arg Val Leu Gly Ala Asn Leu Tyr Ser Pro Ala Phe		2480
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Ser Gln Ser Thr Tyr Val Ala Glu Val Arg Glu Asn Val Ala Ala Gly		2495
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Thr Lys Val Ile His Val Arg Ala Thr Asp Gly Asp Pro Gly Thr Tyr		2510
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Gly Gln Ile Ser Tyr Ala Ile Ile Asn Asp Phe Ala Lys Asp Arg Phe		2525
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Leu Ile Asp Ser Asn Gly Gln Val Ile Thr Thr Glu Arg Leu Asp Arg		2540
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Glu Asn Pro Leu Glu Gly Asp Val Ser Ile Phe Val Arg Ala Leu Asp		2560
	2565	2570
Gly Gly Gly Arg Thr Thr Phe Cys Thr Val Arg Val Ile Val Val Asp		2575
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Glu Asn Asp Asn Ala Pro Gln Phe Met Thr Val Glu Tyr Arg Ala Ser		2590
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Val Arg Ala Asp Val Gly Arg Gly His Leu Val Thr Gln Val Gln Ala		2605
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Ile Asp Pro Asp Asp Gly Ala Asn Ser Arg Ile Thr Tyr Ser Leu Tyr		2620
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Ser Glu Ala Ser Val Ser Val Ala Asp Leu Leu Glu Ile Asp Pro Asp		2640
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Asn Gly Trp Met Val Thr Lys Gly Asn Phe Asn Gln Leu Lys Asn Thr		2655
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	2675	2680
His Ser Leu Ile Pro Val Tyr Ile His Val Leu Pro Pro Glu Thr Phe		2685
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Thr Ala Ile Gly Ser Thr Val Asp Thr Leu Arg Ile Leu Pro Ser Gln		2720
	2725	2730
Asn Val Trp Phe Ser Thr Val Asn Gly Glu Arg Pro Glu Asn Asn Lys		2735
	2740	2745
Gly Gly Val Phe Val Ile Glu Gln Glu Thr Gly Thr Ile Lys Leu Asp		2750
	2755	2760
Lys Arg Leu Asp Arg Glu Thr Ser Pro Ala Phe His Phe Lys Val Ala		2765
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Ala Thr Ile Pro Leu Asp Lys Val Asp Ile Val Phe Thr Val Asp Val		2780
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Asp Ile Lys Val Leu Asp Leu Asn Asp Asn Lys Pro Val Phe Glu Thr		2800
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Ser Ser Tyr Asp Thr Ile Ile Met Glu Gly Met Pro Val Gly Thr Lys		2815

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Leu Thr Gln Val Arg Ala Ile Asp Met Asp Trp Gly Ala Asn Gly Gln		
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Val Thr Tyr Ser Leu His Ser Asp Ser Gln Pro Glu Lys Val Met Glu		
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Ala Phe Asn Ile Asp Ser Asn Thr Gly Trp Ile Ser Thr Leu Lys Asp		
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Leu Asp His Glu Thr Asp Pro Thr Phe Thr Phe Ser Val Val Ala Ser		
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Asp Leu Gly Glu Ala Phe Ser Leu Ser Ser Thr Ala Leu Val Ser Val		
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Arg Val Thr Asp Ile Asn Asp Asn Ala Pro Val Phe Ala Gln Glu Val		
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Tyr Arg Gly Asn Val Lys Glu Ser Asp Pro Pro Gly Glu Val Val Ala		
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Val Leu Ser Thr Trp Asp Arg Asp Thr Ser Asp Val Asn Arg Gln Val		
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Ser Tyr His Ile Thr Gly Gly Asn Pro Arg Gly Arg Phe Ala Leu Gly		
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Leu Val Gln Ser Glu Trp Lys Val Tyr Val Lys Arg Pro Leu Asp Arg		
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Glu Glu Gln Asp Ile Tyr Phe Leu Asn Ile Thr Ala Thr Asp Gly Leu		
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Phe Val Thr Gln Ala Met Val Glu Val Ser Val Ser Asp Val Asn Asp		
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Asn Ser Pro Val Cys Asp Gln Val Ala Tyr Thr Ala Leu Leu Pro Glu		
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Asp Ile Pro Ser Asn Lys Ile Ile Leu Lys Val Ser Ala Lys Asp Ala		
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Asp Ile Gly Ser Asn Gly Tyr Ile Arg Tyr Ser Leu Tyr Gly Ser Gly		
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Asn Ser Glu Phe Phe Leu Asp Pro Glu Ser Gly Glu Leu Lys Thr Leu		
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Ala Leu Leu Asp Arg Glu Arg Ile Pro Val Tyr Ser Leu Met Ala Lys		
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Ala Thr Asp Gly Gly Gly Arg Phe Cys Gln Ser Asn Ile His Leu Ile		
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Leu Glu Asp Val Asn Asp Asn Pro Pro Val Phe Ser Ser Asp His Tyr		
3125	3130	3135
Asn Thr Cys Val Tyr Glu Asn Thr Ala Thr Lys Ala Leu Leu Thr Arg		
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Val Gln Ala Val Asp Pro Asp Ile Gly Ile Asn Arg Lys Val Val Tyr		
3155	3160	3165
Ser Leu Ala Asp Ser Ala Gly Gly Val Phe Ser Ile Asp Ser Ser Ser		
3170	3175	3180
Gly Ile Ile Ile Leu Glu Gln Pro Leu Asp Arg Glu Gln Gln Ser Ser		
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Tyr Asn Ile Ser Val Arg Ala Thr Asp Gln Ser Pro Gly Gln Ser Leu		
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Ser Ser Leu Thr Thr Val Thr Ile Thr Val Leu Asp Ile Asn Asp Asn		
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Pro Pro Val Phe Glu Arg Arg Asp Tyr Leu Val Thr Val Pro Glu Asp		
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Thr Ser Pro Gly Thr Gln Val Leu Ala Val Phe Ala Thr Ser Lys Asp		
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Ile Gly Thr Asn Ala Glu Ile Thr Tyr Leu Ile Arg Ser Gly Asn Glu		

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Glu Val Leu Asp Tyr Glu Leu Cys Lys Arg Phe Tyr Leu Val Val Glu			
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Val Tyr Ser Ala Val Ile Ser Glu Asp Ala Leu Val Gly Asp Ser Val			
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His Phe Ser Ile Val Asn Gly Asp Arg Asp Asn Glu Phe Thr Val Asp			
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Pro Val Leu Gly Leu Val Lys Val Lys Lys Lys Leu Asp Arg Glu Arg			
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Asp Asn Ser Pro Val Phe Thr Pro Ala Asn Tyr Thr Ala Val Ile Gln			
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Glu Asn Lys Pro Val Gly Thr Ser Ile Leu Gln Leu Val Val Thr Asp			
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Arg Asp Ser Phe His Asn Gly Pro Pro Phe Ser Phe Ser Ile Leu Ser			
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Gly Asn Glu Glu Glu Glu Phe Val Leu Asp Pro His Gly Ile Leu Arg			
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Ser Ala Val Val Phe Gln His Thr Glu Ser Leu Glu Tyr Val Leu Cys			
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Val Gln Ala Lys Asp Ser Gly Lys Pro Gln Gln Val Ser His Thr Tyr			
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Ile Arg Val Arg Val Ile Glu Glu Ser Thr His Lys Pro Thr Ala Ile			
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Pro Leu Glu Ile Phe Ile Val Thr Met Glu Asp Asp Phe Pro Gly Gly			
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Val Ile Gly Lys Ile His Ala Thr Asp Gln Asp Met Tyr Asp Val Leu			
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Thr Phe Ala Leu Lys Ser Glu Gln Lys Ser Leu Phe Lys Val Asn Ser			
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His Asp Gly Lys Ile Ile Ala Leu Gly Gly Leu Asp Ser Gly Lys Tyr			
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Val Leu Asn Val Ser Val Ser Asp Gly Arg Phe Gln Val Pro Ile Asp			
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Val Val Val His Val Glu Gln Leu Val His Glu Met Leu Gln Asn Thr			
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Val Thr Ile Arg Phe Glu Asn Val Ser Pro Glu Asp Phe Val Gly Leu			
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His Met His Gly Phe Arg Arg Thr Leu Arg Asn Ala Val Leu Thr Gln			
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Lys Gln Asp Ser Leu Arg Ile Ile Ser Ile Gln Pro Val Ala Gly Thr			
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Asn Gln Leu Asp Met Leu Phe Ala Val Glu Met His Ser Ser Glu Phe			
3700	3705	3710	
Tyr Lys Pro Ala Tyr Leu Ile Gln Lys Leu Ser Asn Ala Arg Arg His			

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 Leu Glu Asn Ile Met Arg Ile Ser Ala Ile Leu Glu Lys Asn Cys Ser
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Tyr	Glu	Asn	Ser	Ala	Ala	Arg	Thr	Tyr	Val	Asn	Ser	Gln	Ser	Arg	Met
	50					55					60				
Gly	Ile	Thr	Leu	Ile	Asp	Leu	Ser	Trp	Asp	Ile	Lys	Tyr	Arg	Ile	Val
65					70					75				80	
Ser	Gly	Asp	Glu	Glu	Gly	Phe	Phe	Lys	Ala	Glu	Glu	Val	Ile	Ile	Ala
			85						90					95	
Asp	Phe	Cys	Phe	Leu	Arg	Ile	Arg	Thr	Lys	Gly	Gly	Asn	Ser	Ala	Ile
			100					105					110		
Leu	Asn	Arg	Glu	Ile	Gln	Asp	Asn	Tyr	Leu	Leu	Ile	Val	Lys	Gly	Ser
			115				120					125			
Val	Arg	Gly	Glu	Asp	Leu	Glu	Ala	Trp	Thr	Lys	Val	Asn	Ile	Gln	Val

	130					135					140					
Leu 145	Asp	Met	Asn	Asp	Leu 150	Arg	Pro	Leu	Phe	Ser	Pro	Thr	Thr	Tyr	Ser 160	
Val	Thr	Ile	Ala	Glu 165	Ser	Thr	Pro	Leu	Arg	Thr	Ser	Val	Ala	Gln	Val	
Thr	Ala	Thr	Asp	Ala 180	Asp	Ile	Gly	Ser	Asn	Gly	Glu	Phe	Tyr	Tyr	Tyr	
Phe	Lys	Asn	Lys	Val 195	Asp	Leu	Phe	Ser	Val	His	Pro	Thr	Ser	Gly	Val	
Ile	Ser	Leu	Ser	Gly 210	Arg	Leu	Asn	Tyr	Asp	Glu	Lys	Asn	Arg	Tyr	Asp	
Leu 225	Glu	Ile	Leu	Ala 230	Val	Asp	Arg	Gly	Met	Lys	Leu	Tyr	Gly	Asn	Asn	
Gly	Val	Ser	Ser	Thr 245	Ala	Lys	Leu	Tyr	Val	His	Ile	Glu	Arg	Ile	Asn	
Glu	His	Ala	Pro	Thr 260	Ile	His	Val	Val	Thr	His	Val	Pro	Phe	Ser	Leu	
Glu	Lys	Glu	Pro	Thr 275	Tyr	Ala	Val	Val	Thr	Val	Asp	Asp	Leu	Asp	Asp	
Gly	Ala	Asn	Gly	Glu 290	Ile	Glu	Ser	Val	Ser	Ile	Val	Ala	Gly	Asp	Pro	
Leu 305	Asp	Gln	Phe	Phe 310	Leu	Ala	Lys	Glu	Gly	Lys	Trp	Leu	Asn	Glu	Tyr	
Lys	Ile	Lys	Glu	Arg 325	Lys	Gln	Ile	Asp	Trp	Glu	Ser	Phe	Pro	Tyr	Gly	
Tyr	Asn	Leu	Thr	Leu 340	Gln	Ala	Lys	Asp	Lys	Gly	Ser	Pro	Gln	Lys	Cys	
Ser	Ala	Leu	Lys	Ala 355	Val	Tyr	Ile	Gly	Asn	Pro	Thr	Arg	Asp	Thr	Val	
Pro	Ile	Arg	Phe	Glu 370	Lys	Glu	Val	Tyr	Asp	Val	Ser	Ile	Ser	Glu	Phe	
Ser 385	Pro	Pro	Gly	Val 390	Val	Val	Ala	Ile	Val	Lys	Leu	Ser	Pro	Glu	Pro	
Ile	Asp	Val	Glu	Tyr 405	Lys	Leu	Ser	Pro	Gly	Glu	Asp	Ala	Val	Tyr	Phe	
Lys	Ile	Asn	Pro	Arg 420	Ser	Gly	Leu	Ile	Val	Thr	Ala	Arg	Pro	Leu	Asn	
Thr	Val	Lys	Lys	Glu 435	Val	Tyr	Lys	Leu	Glu	Val	Thr	Asn	Lys	Glu	Gly	
Asp	Leu	Lys	Ala	Gln 450	Val	Thr	Ile	Ser	Ile	Glu	Asp	Ala	Asn	Asp	His	
Thr 465	Pro	Glu	Phe	Gln 470	Gln	Pro	Leu	Tyr	Asp	Ala	Tyr	Val	Asn	Glu	Ser	
Val	Pro	Val	Gly	Thr 485	Ser	Val	Leu	Thr	Val	Ser	Ala	Ser	Asp	Lys	Asp	
Lys	Gly	Glu	Asn	Gly 500	Tyr	Ile	Thr	Tyr	Ser	Ile	Ala	Ser	Leu	Asn	Leu	
Leu	Pro	Phe	Val	Ile 515	Asn	Gln	Phe	Thr	Gly	Val	Ile	Ser	Thr	Thr	Glu	
Glu	Leu	Asp	Phe	Glu 530	Ser	Ser	Pro	Glu	Ile	Tyr	Arg	Phe	Ile	Val	Arg	
Ala 545	Ser	Asp	Trp	Gly 550	Ser	Pro	Tyr	Arg	His	Glu	Ser	Glu	Val	Asn	Val	
Thr	Ile	Arg	Ile	Gly 565	Asn	Val	Asn	Asp	Asn	Ser	Pro	Leu	Phe	Glu	Lys	
Val	Ala	Cys	Gln	Gly 570	Val	Ile	Ser	Tyr	Asp	Phe	Pro	Val	Gly	Gly	His	

[illegible]

1025	1030	1035	1040
Asp Phe Ala Val Val Gly Ser Val Lys Glu Asn Ser Arg Ile Gly Thr			
	1045	1050	1055
Ser Val Leu Gln Val Thr Ala Arg Asp Glu Asp Ser Gly Arg Asp Gly			
	1060	1065	1070
Glu Ile Gln Tyr Ser Ile Arg Asp Gly Ser Gly Leu Gly Arg Phe Ser			
	1075	1080	1085
Ile Asp Asp Glu Ser Gly Val Ile Thr Ala Ala Asp Ile Leu Asp Arg			
	1090	1095	1100
Glu Thr Met Gly Ser Tyr Trp Leu Thr Val Tyr Ala Thr Asp Arg Gly			
1105	1110	1115	1120
Val Val Pro Leu Tyr Ser Thr Ile Glu Val Tyr Ile Glu Val Glu Asp			
	1125	1130	1135
Val Asn Asp Asn Ala Pro Leu Thr Ser Glu Pro Ile Tyr Tyr Pro Val			
	1140	1145	1150
Val Met Glu Asn Ser Pro Lys Asp Val Ser Val Ile Gln Ile Gln Ala			
	1155	1160	1165
Glu Asp Pro Asp Ser Ser Ser Asn Glu Lys Leu Thr Tyr Arg Ile Thr			
1170	1175	1180	
Ser Gly Asn Pro Gln Asn Phe Phe Ala Ile Asn Ile Lys Thr Gly Leu			
1185	1190	1195	1200
Ile Thr Thr Thr Ser Arg Lys Leu Asp Arg Glu Gln Gln Ala Glu His			
	1205	1210	1215
Phe Leu Glu Val Thr Val Thr Asp Gly Gly Pro Ser Pro Lys Gln Ser			
	1220	1225	1230
Thr Ile Trp Val Val Val Gln Val Leu Asp Glu Asn Asp Asn Lys Pro			
	1235	1240	1245
Gln Phe Pro Glu Lys Val Tyr Gln Ile Lys Leu Pro Glu Arg Asp Arg			
1250	1255	1260	
Lys Lys Arg Gly Glu Pro Ile Tyr Arg Ala Phe Ala Phe Asp Arg Asp			
1265	1270	1275	1280
Glu Gly Pro Asn Ala Glu Ile Ser Tyr Ser Ile Val Asp Gly Asn Asp			
	1285	1290	1295
Asp Gly Lys Phe Phe Ile Asp Pro Lys Thr Gly Met Val Ser Ser Arg			
	1300	1305	1310
Lys Gln Phe Thr Ala Gly Ser Tyr Asp Ile Leu Thr Ile Lys Ala Val			
1315	1320	1325	
Asp Asn Gly Arg Pro Gln Lys Ser Ser Thr Ala Arg Leu His Ile Glu			
1330	1335	1340	
Trp Ile Lys Lys Pro Pro Ser Pro Ile Pro Leu Thr Phe Asp Glu			
1345	1350	1355	1360
Pro Phe Tyr Asn Phe Thr Val Met Glu Ser Asp Arg Val Thr Glu Ile			
	1365	1370	1375
Val Gly Val Val Ser Val Gln Pro Ala Asn Thr Pro Leu Trp Phe Asp			
	1380	1385	1390
Ile Val Gly Gly Asn Phe Asp Ser Ala Phe Asp Ala Glu Lys Gly Val			
1395	1400	1405	
Gly Thr Ile Val Ile Ala Lys Pro Leu Asp Ala Glu Gln Arg Ser Ile			
1410	1415	1420	
Tyr Asn Met Ser Val Glu Val Thr Asp Gly Thr Asn Val Ala Val Thr			
1425	1430	1435	1440
Gln Val Phe Ile Lys Val Leu Asp Asn Asn Asp Asn Gly Pro Glu Phe			
	1445	1450	1455
Ser Gln Pro Asn Tyr Asp Val Thr Ile Ser Glu Asp Val Leu Pro Asp			
	1460	1465	1470
Thr Glu Ile Leu Gln Ile Glu Ala Thr Asp Arg Asp Glu Lys His Lys			

1475	1480	1485
Leu Ser Tyr Thr Val His Ser Ser Ile Asp Ser Ile Ser Met Arg Lys		
1490	1495	1500
Phe Arg Ile Asp Pro Ser Thr Gly Val Leu Tyr Thr Ala Glu Arg Leu		
1505	1510	1515
Asp His Glu Ala Gln Asp Lys His Ile Leu Asn Ile Met Val Arg Asp		1520
1525	1530	1535
Gln Glu Phe Pro Tyr Arg Arg Asn Leu Ala Arg Val Ile Val Asn Val		
1540	1545	1550
Glu Asp Ala Asn Asp His Ser Pro Tyr Phe Thr Asn Pro Leu Tyr Glu		
1555	1560	1565
Ala Ser Val Phe Glu Ser Ala Ala Leu Gly Ser Ala Val Leu Gln Val		
1570	1575	1580
Thr Ala Leu Asp Lys Asp Lys Gly Glu Asn Ala Glu Leu Ile Tyr Thr		
1585	1590	1595
Ile Glu Ala Gly Asn Thr Gly Asn Met Phe Lys Ile Glu Pro Val Leu		1600
1605	1610	1615
Gly Ile Ile Thr Ile Cys Lys Glu Pro Asp Met Thr Thr Met Gly Gln		
1620	1625	1630
Phe Val Leu Ser Ile Lys Val Thr Asp Gln Gly Ser Pro Pro Met Ser		
1635	1640	1645
Ala Thr Ala Ile Val Arg Ile Ser Val Thr Met Ser Asp Asn Ser His		
1650	1655	1660
Pro Lys Phe Ile His Lys Asp Tyr Gln Ala Glu Val Asn Glu Asn Val		
1665	1670	1675
Asp Ile Gly Thr Ser Val Ile Leu Ile Ser Ala Ile Ser Gln Ser Thr		
1685	1690	1695
Leu Ile Tyr Glu Val Lys Asp Gly Asp Ile Asn Gly Ile Phe Thr Ile		
1700	1705	1710
Asn Pro Tyr Ser Gly Val Ile Thr Thr Gln Lys Ala Leu Asp Tyr Glu		
1715	1720	1725
Arg Thr Ser Ser Tyr Gln Leu Ile Ile Gln Ala Thr Asn Met Ala Gly		
1730	1735	1740
Met Ala Ser Asn Ala Thr Val Asn Ile Gln Ile Val Asp Glu Asn Asp		
1745	1750	1755
Asn Ala Pro Val Phe Leu Phe Ser Gln Tyr Ser Gly Ser Leu Ser Glu		1760
1765	1770	1775
Ala Ala Pro Ile Asn Ser Ile Val Arg Ser Leu Asp Asn Ser Pro Leu		
1780	1785	1790
Val Ile Arg Ala Thr Asp Ala Asp Ser Asn Arg Asn Ala Leu Leu Val		
1795	1800	1805
Tyr Gln Ile Val Glu Ser Thr Ala Lys Lys Phe Phe Thr Val Asp Ser		
1810	1815	1820
Ser Thr Gly Ala Ile Arg Thr Ile Ala Asn Leu Asp His Glu Thr Ile		
1825	1830	1835
Ala His Phe His Phe His Val His Val Arg Asp Ser Gly Ser Pro Gln		1840
1845	1850	1855
Leu Thr Ala Glu Ser Pro Val Glu Val Asn Ile Glu Val Thr Asp Val		
1860	1865	1870
Asn Asp Asn Pro Pro Val Phe Thr Gln Ala Val Phe Glu Thr Ile Leu		
1875	1880	1885
Leu Leu Pro Thr Tyr Val Gly Val Glu Val Leu Lys Val Ser Ala Thr		
1890	1895	1900
Asp Pro Asp Ser Glu Val Pro Pro Glu Leu Thr Tyr Ser Leu Met Glu		
1905	1910	1915
Gly Ser Leu Asp His Phe Leu Ile Asp Ser Asn Ser Gly Val Leu Thr		1920

				1925						1930						1935		
Ile	Lys	Asn	Asn	Asn	Leu	Ser	Lys	Asp	His	Tyr	Met	Leu	Ile	Val	Lys			
				1940						1945						1950		
Val	Ser	Asp	Gly	Lys	Phe	Tyr	Ser	Thr	Ser	Met	Val	Thr	Ile	Met	Val			
				1955						1960						1965		
Lys	Glu	Ala	Met	Asp	Ser	Gly	Leu	His	Phe	Thr	Gln	Ser	Phe	Tyr	Ser			
				1970						1975						1980		
Thr	Ser	Ile	Ser	Glu	Asn	Asn	Thr	Asn	Ile	Thr	Lys	Val	Ala	Ile	Val			
1985					1990						1995						2000	
Asn	Ala	Val	Gly	Asn	Arg	Leu	Asn	Glu	Pro	Leu	Lys	Tyr	Ser	Ile	Leu			
				2005						2010						2015		
Asn	Pro	Gly	Asn	Lys	Phe	Lys	Ile	Lys	Ser	Thr	Ser	Gly	Val	Ile	Gln			
				2020						2025						2030		
Thr	Thr	Gly	Val	Pro	Phe	Asp	Arg	Glu	Glu	Gln	Glu	Leu	Tyr	Glu	Leu			
				2035						2040						2045		
Val	Val	Glu	Ala	Ser	Arg	Glu	Leu	Asp	His	Leu	Arg	Val	Ala	Arg	Val			
				2050						2055						2060		
Val	Val	Arg	Val	Asn	Ile	Glu	Asp	Ile	Asn	Asp	Asn	Ser	Pro	Val	Phe			
2065				2070						2075						2080		
Val	Gly	Leu	Pro	Tyr	Tyr	Ala	Ala	Val	Gln	Val	Asp	Ala	Glu	Pro	Gly			
				2085						2090						2095		
Thr	Leu	Ile	Tyr	Gln	Val	Thr	Ala	Ile	Asp	Lys	Asp	Lys	Gly	Pro	Asn			
				2100						2105						2110		
Gly	Glu	Val	Thr	Tyr	Val	Leu	Gln	Asp	Asp	Tyr	Gly	His	Phe	Glu	Ile			
				2115						2120						2125		
Asn	Pro	Asn	Ser	Gly	Asn	Val	Ile	Leu	Lys	Glu	Ala	Phe	Asn	Ser	Asp			
				2130						2135						2140		
Leu	Ser	Asn	Ile	Glu	Tyr	Gly	Val	Thr	Ile	Leu	Ala	Lys	Asp	Gly	Gly			
2145				2150						2155						2160		
Lys	Pro	Ser	Leu	Ser	Thr	Ser	Val	Glu	Leu	Pro	Ile	Thr	Ile	Val	Asn			
				2165						2170						2175		
Lys	Ala	Met	Pro	Val	Phe	Asp	Lys	Pro	Phe	Tyr	Thr	Ala	Ser	Val	Asn			
				2180						2185						2190		
Glu	Asp	Ile	Arg	Met	Asn	Thr	Pro	Ile	Leu	Ser	Ile	Asn	Ala	Thr	Ser			
				2195						2200						2205		
Pro	Glu	Gly	Gln	Gly	Ile	Ile	Tyr	Ile	Ile	Ile	Asp	Gly	Asp	Pro	Phe			
				2210						2215						2220		
Lys	Gln	Phe	Asn	Ile	Asp	Phe	Asp	Thr	Gly	Val	Leu	Lys	Val	Val	Ser			
2225				2230						2235						2240		
Pro	Leu	Asp	Tyr	Glu	Val	Thr	Ser	Ala	Tyr	Lys	Leu	Thr	Ile	Arg	Ala			
				2245						2250						2255		
Ser	Asp	Ala	Leu	Thr	Gly	Ala	Arg	Ala	Glu	Val	Thr	Val	Asp	Leu	Leu			
				2260						2265						2270		
Val	Asn	Asp	Val	Asn	Asp	Asn	Pro	Pro	Ile	Phe	Asp	Gln	Pro	Thr	Tyr			
		</																

2370	2375	2380
Asp Asn Pro Pro Val Phe Asn Gln Leu Ile Tyr Glu Ser Tyr Val Ser		
2385	2390	2395
Glu Leu Ala Pro Arg Gly His Phe Val Thr Cys Val Gln Ala Ser Asp		2400
	2405	2410
Ala Asp Ser Ser Asp Phe Asp Arg Leu Glu Tyr Ser Ile Leu Ser Gly		2415
	2420	2425
Asn Asp Arg Thr Ser Phe Leu Met Asp Ser Lys Ser Gly Val Ile Thr		2430
	2435	2440
Leu Ser Asn His Arg Lys Gln Arg Met Glu Pro Leu Tyr Ser Leu Asn		2445
	2450	2455
Val Ser Val Ser Asp Gly Leu Phe Thr Ser Thr Ala Gln Val His Ile		2460
2465	2470	2475
Arg Val Leu Gly Ala Asn Leu Tyr Ser Pro Ala Phe Ser Gln Ser Thr		2480
	2485	2490
Tyr Val Ala Glu Val Arg Glu Asn Val Ala Ala Gly Thr Lys Val Ile		2495
	2500	2505
His Val Arg Ala Thr Asp Gly Asp Pro Gly Thr Tyr Gly Gln Ile Ser		2510
	2515	2520
Tyr Ala Ile Ile Asn Asp Phe Ala Lys Asp Arg Phe Leu Ile Asp Ser		2525
	2530	2535
Asn Gly Gln Val Ile Thr Thr Glu Arg Leu Asp Arg Glu Asn Pro Leu		2540
2545	2550	2555
Glu Gly Asp Val Ser Ile Phe Val Arg Ala Leu Asp Gly Gly Gly Arg		2560
	2565	2570
Thr Thr Phe Cys Thr Val Arg Val Ile Val Val Asp Glu Asn Asp Asn		2575
	2580	2585
Ala Pro Gln Phe Met Thr Val Glu Tyr Arg Ala Ser Val Arg Ala Asp		2590
	2595	2600
Val Gly Arg Gly His Leu Val Thr Gln Val Gln Ala Ile Asp Pro Asp		2605
	2610	2615
Asp Gly Ala Asn Ser Arg Ile Thr Tyr Ser Leu Tyr Ser Glu Ala Ser		2620
2625	2630	2635
Val Ser Val Ala Asp Leu Leu Glu Ile Asp Pro Asp Asn Gly Trp Met		2640
	2645	2650
Val Thr Lys Gly Asn Phe Asn Gln Leu Lys Asn Thr Val Leu Ser Phe		2655
	2660	2665
Phe Val Lys Ala Val Asp Gly Gly Ile Pro Val Lys His Ser Leu Ile		2670
	2675	2680
Pro Val Tyr Ile His Val Leu Pro Pro Glu Thr Phe Leu Pro Ser Phe		2685
	2690	2695
Thr Gln Ser Gln Tyr Ser Phe Thr Ile Ala Glu Asp Thr Ala Ile Gly		2700
2705	2710	2715
Ser Thr Val Asp Thr Leu Arg Ile Leu Pro Ser Gln Asn Val Trp Phe		2720
	2725	2730
Ser Thr Val Asn Gly Glu Arg Pro Glu Asn Asn Lys Gly Gly Val Phe		2735
	2740	2745
Val Ile Glu Gln Glu Thr Gly Thr Ile Lys Leu Asp Lys Arg Leu Asp		2750
	2755	2760
Arg Glu Thr Ser Pro Ala Phe His Phe Lys Val Ala Ala Thr Ile Pro		2765
	2770	2775
Leu Asp Lys Val Asp Ile Val Phe Thr Val Asp Val Asp Ile Lys Val		2780
2785	2790	2795
Leu Asp Leu Asn Asp Asn Lys Pro Val Phe Glu Thr Ser Ser Tyr Asp		2800
	2805	2810
Thr Ile Ile Met Glu Gly Met Pro Val Gly Thr Lys Leu Thr Gln Val		2815

[illegible]

3265		3270		3275		3280
Lys Ile Asn Pro	Lys Thr Gly Gly Ile Ser Val Ser Glu Val	Leu Asp				
	3285		3290		3295	
Tyr Glu Leu Cys	Lys Arg Phe Tyr Leu Val Val Glu Ala Lys Asp Gly					
	3300		3305		3310	
Gly Thr Pro Ala	Leu Ser Ala Val Ala Thr Val Asn Ile Asn Leu Thr					
	3315		3320		3325	
Asp Val Asn Asp	Asn Pro Pro Lys Phe Ser Gln Asp Val Tyr Ser Ala					
	3330		3335		3340	
Val Ile Ser Glu	Asp Ala Leu Val Gly Asp Ser Val Ile Leu Leu Ile					
	3345		3350		3355	3360
Ala Glu Asp Val	Asp Ser Gln Pro Asn Gly Gln Ile His Phe Ser Ile					
	3365		3370		3375	
Val Asn Gly Asp	Arg Asp Asn Glu Phe Thr Val Asp Pro Val Leu Gly					
	3380		3385		3390	
Leu Val Lys Val	Lys Lys Lys Leu Asp Arg Glu Arg Val Ser Gly Tyr					
	3395		3400		3405	
Ser Leu Leu Val	Gln Ala Val Asp Ser Gly Ile Pro Ala Met Ser Ser					
	3410		3415		3420	
Thr Ala Thr Val	Asn Ile Asp Ile Ser Asp Val Asn Asp Asn Ser Pro					
	3425		3430		3435	3440
Val Phe Thr Pro	Ala Asn Tyr Thr Ala Val Ile Gln Glu Asn Lys Pro					
	3445		3450		3455	
Val Gly Thr Ser	Ile Leu Gln Leu Val Val Thr Asp Arg Asp Ser Phe					
	3460		3465		3470	
His Asn Gly Pro	Pro Phe Ser Phe Ser Ile Leu Ser Gly Asn Glu Glu					
	3475		3480		3485	
Glu Glu Phe Val	Leu Asp Pro His Gly Ile Leu Arg Ser Ala Val Val					
	3490		3495		3500	
Phe Gln His Thr	Glu Ser Leu Glu Tyr Val Leu Cys Val Gln Ala Lys					
	3505		3510		3515	3520
Asp Ser Gly Lys	Pro Gln Gln Val Ser His Thr Tyr Ile Arg Val Arg					
	3525		3530		3535	
Val Ile Glu Glu	Ser Thr His Lys Pro Thr Ala Ile Pro Leu Glu Ile					
	3540		3545		3550	
Phe Ile Val Thr	Met Glu Asp Asp Phe Pro Gly Gly Val Ile Gly Lys					
	3555		3560		3565	
Ile His Ala Thr	Asp Gln Asp Met Tyr Asp Val Leu Thr Phe Ala Leu					
	3570		3575		3580	
Lys Ser Glu Gln	Lys Ser Leu Phe Lys Val Asn Ser His Asp Gly Lys					
	3585		3590		3595	3600
Ile Ile Ala Leu	Gly Gly Leu Asp Ser Gly Lys Tyr Val Leu Asn Val					
	3605		3610		3615	
Ser Val Ser Asp	Gly Arg Phe Gln Val Pro Ile Asp Val Val Val His					
	3620		3625		3630	
Val Glu Gln Leu	Val His Glu Met Leu Gln Asn Thr Val Thr Ile Arg					
	3635		3640		3645	
Phe Glu Asn Val	Ser Pro Glu Asp Phe Val Gly Leu His Met His Gly					
	3650		3655		3660	
Phe Arg Arg Thr	Leu Arg Asn Ala Val Leu Thr Gln Lys Gln Asp Ser					
	3665		3670		3675	3680
Leu Arg Ile Ile	Ser Ile Gln Pro Val Ala Gly Thr Asn Gln Leu Asp					
	3685		3690		3695	
Met Leu Phe Ala	Val Glu Met His Ser Ser Glu Phe Tyr Lys Pro Ala					
	3700		3705		3710	
Tyr Leu Ile Gln	Lys Leu Ser Asn Ala Arg Arg His Leu Glu Asn Ile					

3715	3720	3725
Met Arg Ile Ser Ala Ile	Leu Glu Lys Asn Cys Ser Gly Leu Asp Cys	
3730	3735	3740
Gln Glu Gln His Cys Glu Gln Gly Leu Ser Leu Asp Ser His Ala Leu		
3745	3750	3755
Met Thr Tyr Ser Thr Ala Arg Ile Ser Phe Val Cys Pro Arg Phe Tyr		
3765	3770	3775
Arg Asn Val Arg Cys Thr Cys Asn Gly Gly Leu Cys Pro Gly Ser Asn		
3780	3785	3790
Asp Pro Cys Val Glu Lys Pro Cys Pro Gly Asp Met Gln Cys Val Gly		
3795	3800	3805
Tyr Glu Ala Ser Arg Arg Pro Phe Leu Cys Gln Cys Pro Pro Gly Lys		
3810	3815	3820
Leu Gly Glu Cys Ser Gly His Thr Ser Leu Ser Phe Ala Gly Asn Ser		
3825	3830	3835
Tyr Ile Lys Tyr Arg Leu Ser Glu Asn Ser Lys Glu Glu Asp Phe Lys		
3845	3850	3855
Leu Ala Leu Arg Leu Arg Thr Leu Gln Ser Asn Gly Ile Ile Met Tyr		
3860	3865	3870
Thr Arg Ala Asn Pro Cys Ile Ile Leu Lys Ile Val Asp Gly Lys Leu		
3875	3880	3885
Trp Phe Gln Leu Asp Cys Gly Ser Gly Pro Gly Ile Leu Gly Ile Ser		
3890	3895	3900
Gly Arg Ala Val Asn Asp Gly Ser Trp His Ser Val Phe Leu Glu Leu		
3905	3910	3915
Asn Arg Asn Phe Thr Ser Leu Ser Leu Asp Asp Ser Tyr Val Glu Arg		
3925	3930	3935
Arg Arg Ala Pro Leu Tyr Phe Gln Thr Leu Ser Thr Glu Ser Ser Ile		
3940	3945	3950
Tyr Phe Gly Ala Leu Val Gln Ala Asp Asn Ile Arg Ser Leu Thr Asp		
3955	3960	3965
Thr Arg Val Thr Gln Val Leu Ser Gly Phe Gln Gly Cys Leu Asp Ser		
3970	3975	3980
Val Ile Leu Asn Asn Asn Glu Leu Pro Leu Gln Asn Lys Arg Ser Ser		
3985	3990	3995
Phe Ala Glu Val Val Gly Leu Thr Glu Leu Lys Leu Gly Cys Val Leu		
4005	4010	4015
Tyr Pro Asp Ala Cys Lys Arg Ser Pro Cys Gln His Gly Gly Ser Cys		
4020	4025	4030
Thr Gly Leu Pro Ser Gly Gly Tyr Gln Cys Thr Cys Leu Ser Gln Phe		
4035	4040	4045
Thr Gly Arg Asn Cys Glu Ser Glu Ile Thr Ala Cys Phe Pro Asn Pro		
4050	4055	4060
Cys Arg Asn Gly Gly Ser Cys Asp Pro Ile Gly Asn Thr Phe Ile Cys		
4065	4070	4075
Asn Cys Lys Ala Gly Leu Thr Gly Val Thr Cys Glu Glu Asp Ile Asn		
4085	4090	4095
Glu Cys Glu Arg Glu Glu Cys Glu Asn Gly Gly Ser Cys Val Asn Val		
4100	4105	4110
Phe Gly Ser Phe Leu Cys Asn Cys Thr Pro Gly Tyr Val Gly Gln Tyr		
4115	4120	4125
Cys Gly Leu Arg Pro Val Val Val Pro Asn Ile Gln Ala Gly His Ser		
4130	4135	4140
Tyr Val Gly Lys Glu Glu Leu Ile Gly Ile Ala Val Val Leu Phe Val		
4145	4150	4155
Ile Phe Ile Leu Val Val Leu Phe Ile Val Phe Arg Lys Lys Val Phe		

4165					4170					4175						
Arg	Lys	Asn	Tyr	Ser	Arg	Asn	Asn	Ile	Thr	Leu	Val	Gln	Asp	Pro	Ala	
4180					4185					4190						
Thr	Ala	Ala	Leu	Leu	Asn	Lys	Ser	Asn	Gly	Ile	Pro	Phe	Arg	Asn	Leu	
4195					4200					4205						
Arg	Gly	Ser	Gly	Asp	Gly	Arg	Asn	Val	Tyr	Gln	Glu	Val	Gly	Pro	Pro	
4210					4215					4220						
Gln	Val	Pro	Val	Arg	Pro	Met	Ala	Tyr	Thr	Pro	Cys	Phe	Gln	Ser	Asp	
4225					4230					4235					4240	
Ser	Arg	Ser	Asn	Leu	Asp	Lys	Ile	Val	Asp	Gly	Leu	Gly	Gly	Glu	His	
4245					4250					4255						
Gln	Glu	Met	Thr	Thr	Phe	His	Pro	Glu	Ser	Pro	Arg	Ile	Leu	Thr	Ala	
4260					4265					4270						
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Gln Ser Arg Met Gly Ile Thr Leu Ile Asp Leu Ser Trp Asp Ile Lys
65     70     75     80
Tyr Arg Ile Val Ser Gly Asp Glu Glu Gly Phe Phe Lys Ala Glu Glu
85     90     95
Val Ile Ile Ala Asp Phe Cys Phe Leu Arg Ile Arg Thr Lys Gly Gly
100    105    110
Asn Ser Ala Ile Leu Asn Arg Glu Ile Gln Asp Asn Tyr Leu Leu Ile
115    120    125
Val Lys Gly Ser Val Arg Gly Glu Asp Leu Glu Ala Trp Thr Lys Val
130    135    140
Asn Ile Gln Val Leu Asp Met Asn Asp Leu Arg Pro Leu Phe Ser Pro
145    150    155    160
Thr Thr Tyr Ser Val Thr Ile Ala Glu Ser Thr Pro Leu Arg Thr Ser
165    170    175
Val Ala Gln Val Thr Ala Thr Asp Ala Asp Ile Gly Ser Asn Gly Glu
180    185    190
Phe Tyr Tyr Tyr Phe Lys Asn Lys Val Asp Leu Phe Ser Val His Pro
195    200    205
Thr Ser Gly Val Ile Ser Leu Ser Gly Arg Leu Asn Tyr Asp Glu Lys
210    215    220
Asn Arg Tyr Asp Leu Glu Ile Leu Ala Val Asp Arg Gly Met Lys Leu
225    230    235    240
Tyr Gly Asn Asn Gly Val Ser Ser Thr Ala Lys Leu Tyr Val His Ile
245    250    255
Glu Arg Ile Asn Glu His Ala Pro Thr Ile His Val Val Thr His Val
260    265    270
Pro Phe Ser Leu Glu Lys Glu Pro Thr Tyr Ala Val Val Thr Val Asp
275    280    285
Asp Leu Asp Asp Gly Ala Asn Gly Glu Ile Glu Ser Val Ser Ile Val

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290					295					300					
Ala 305	Gly	Asp	Pro	Leu	Asp 310	Gln	Phe	Phe	Leu	Ala 315	Lys	Glu	Gly	Lys	Trp 320
Leu	Asn	Glu	Tyr	Lys 325	Ile	Lys	Glu	Arg	Lys 330	Gln	Ile	Asp	Trp	Glu	Ser 335
Phe	Pro	Tyr	Gly 340	Tyr	Asn	Leu	Thr	Leu 345	Gln	Ala	Lys	Asp	Lys	Gly	Ser 350
Pro	Gln	Lys 355	Cys	Ser	Ala	Leu	Lys 360	Ala	Val	Tyr	Ile	Gly	Asn	Pro	Thr 365
Arg	Asp 370	Thr	Val	Pro	Ile	Arg	Phe 375	Glu	Lys	Glu	Val	Tyr	Asp	Val	Ser 380
Ile 385	Ser	Glu	Phe	Ser	Pro 390	Pro	Gly	Val	Val	Val 395	Ala	Ile	Val	Lys	Leu 400
Ser	Pro	Glu	Pro	Ile 405	Asp	Val	Glu	Tyr	Lys 410	Leu	Ser	Pro	Gly	Glu	Asp 415
Ala	Val	Tyr	Phe 420	Lys	Ile	Asn	Pro	Arg 425	Ser	Gly	Leu	Ile	Val	Thr	Ala 430
Arg	Pro	Leu 435	Asn	Thr	Val	Lys	Lys 440	Glu	Val	Tyr	Lys	Leu	Glu	Val	Thr 445
Asn	Lys 450	Glu	Gly	Asp	Leu	Lys	Ala 455	Gln	Val	Thr	Ile	Ser	Ile	Glu	Asp 460
Ala 465	Asn	Asp	His	Thr	Pro 470	Glu	Phe	Gln	Gln	Pro 475	Leu	Tyr	Asp	Ala	Tyr 480
Val	Asn	Glu	Ser	Val 485	Pro	Val	Gly	Thr	Ser	Val 490	Leu	Thr	Val	Ser	Ala 495
Ser	Asp	Lys	Asp 500	Lys	Gly	Glu	Asn	Gly 505	Tyr	Ile	Thr	Tyr	Ser	Ile	Ala 510
Ser	Leu	Asn 515	Leu	Leu	Pro	Phe	Val 520	Ile	Asn	Gln	Phe	Thr	Gly	Val	Ile 525
Ser	Thr 530	Thr	Glu	Glu	Leu	Asp 535	Phe	Glu	Ser	Ser	Pro	Glu	Ile	Tyr	Arg 540
Phe 545	Ile	Val	Arg	Ala	Ser 550	Asp	Trp	Gly	Ser	Pro 555	Tyr	Arg	His	Glu	Ser 560
Glu	Val	Asn	Val	Thr 565	Ile	Arg	Ile	Gly	Asn	Val 570	Asn	Asp	Asn	Ser	Pro 575
Leu	Phe	Glu	Lys 580	Val	Ala	Cys	Gln	Gly 585	Val	Ile	Ser	Tyr	Asp	Phe	Pro 590
Val	Gly	Gly 595	His	Ile	Thr	Ala	Val 600	Ser	Ala	Ile	Asp	Ile	Asp	Glu	Leu 605
Glu	Leu 610	Val	Lys	Tyr	Lys	Ile	Ile 615	Ser	Gly	Asn	Glu	Leu	Gly	Phe	Phe 620
Tyr 625	Leu	Asn	Pro	Asp	Ser 630	Gly	Val	Leu	Gln	Leu 635	Lys	Lys	Ser	Leu	Thr 640
Asn	Ser	Gly	Ile	Lys 645	Asn	Gly	Asn	Phe	Ala	Leu 650	Arg	Ile	Thr	Ala	Thr 655
Asp	Gly	Glu	Asn 660	Leu	Ala	Asp	Pro	Met	Ser	Ile 665	Asn	Ile	Ser	Val	Leu 670
His	Gly	Lys 675	Val	Ser	Ser	Lys	Ser 680	Phe	Ser	Cys	Arg	Glu	Thr	Arg	Val 685
Ala	Gln	Lys 690	Leu	Ala	Glu	Lys 695	Leu	Leu	Ile	Lys	Ala	Lys	Ala	Asn	Gly 700
Lys 705	Leu	Asn	Leu	Glu	Asp 710	Gly	Phe	Leu	Asp	Phe 715	Tyr	Ser	Ile	Asn	Arg 720
Gln	Gly	Pro	Tyr 725	Phe	Asp	Lys	Ser	Phe	Pro	Ser 730	Asp	Val	Ala	Val	Lys 735
Glu	Asp	Leu	Pro	Val	Gly	Ala	Asn	Ile	Leu	Lys	Ile	Lys	Ala	Tyr	Asp 740

			740					745					750				
Ala	Asp	Ser	Gly	Phe	Asn	Gly	Lys	Val	Leu	Phe	Thr	Ile	Ser	Asp	Gly		
			755						760						765		
Asn	Thr	Asp	Ser	Cys	Phe	Asn	Ile	Asp	Met	Glu	Thr	Gly	Gln	Leu	Lys		
			770						775						780		
Val	Leu	Met	Pro	Met	Asp	Arg	Glu	His	Thr	Asp	Leu	Tyr	Leu	Leu	Asn		
			785						790						795	800	
Ile	Thr	Ile	Tyr	Asp	Leu	Gly	Asn	Pro	Gln	Lys	Ser	Ser	Trp	Arg	Leu		
			805						810						815		
Leu	Thr	Ile	Asn	Val	Glu	Asp	Ala	Asn	Asp	Asn	Ser	Pro	Val	Phe	Ile		
			820						825						830		
Gln	Asp	Ser	Tyr	Ser	Val	Asn	Ile	Leu	Glu	Ser	Ser	Gly	Ile	Gly	Thr		
			835						840						845		
Glu	Ile	Ile	Gln	Val	Glu	Ala	Arg	Asp	Lys	Asp	Leu	Gly	Ser	Asn	Gly		
			850						855						860		
Glu	Val	Thr	Tyr	Ser	Val	Leu	Thr	Asp	Thr	Gln	Gln	Phe	Ala	Ile	Asn		
			865						870						875	880	
Ser	Ser	Thr	Gly	Ile	Val	Tyr	Val	Ala	Asp	Gln	Leu	Asp	Arg	Glu	Ser		
			885						890						895		
Lys	Ala	Asn	Tyr	Ser	Leu	Lys	Ile	Glu	Ala	Arg	Asp	Lys	Ala	Glu	Ser		
			900						905						910		
Gly	Gln	Gln	Leu	Phe	Ser	Val	Val	Thr	Leu	Lys	Val	Phe	Leu	Asp	Asp		
			915						920						925		
Val	Asn	Asp	Cys	Ser	Pro	Ala	Phe	Ile	Pro	Ser	Ser	Tyr	Ser	Val	Lys		
			930						935						940		
Val	Leu	Glu	Asp	Leu	Pro	Val	Gly	Thr	Val	Ile	Ala	Trp	Leu	Glu	Thr		
			945						950						955	960	
His	Asp	Pro	Asp	Leu	Gly	Leu	Gly	Gly	Gln	Val	Arg	Tyr	Ser	Leu	Val		
			965						970						975		
Asn	Asp	Tyr	Asn	Gly	Arg	Phe	Glu	Ile	Asp	Lys	Ala	Ser	Gly	Ala	Ile		
			980						985						990		
Arg	Leu	Ser	Lys	Glu	Leu	Asp	Tyr	Glu	Lys	Gln	Gln	Phe	Tyr	Asn	Leu		
			995						1000						1005		
Thr	Val	Arg	Ala	Lys	Asp	Lys	Gly	Arg	Pro	Val	Ser	Leu	Ser	Ser	Val		
			1010						1015						1020		
Ser	Phe	Val	Glu	Val	Glu	Val	Val	Asp	Val	Asn	Glu	Asn	Leu	His	Thr		
			1025						1030						1035	1040	
Pro	Tyr	Phe	Pro	Asp	Phe	Ala	Val	Val	Gly	Ser	Val	Lys	Glu	Asn	Ser		
			1045						1050						1055		
Arg	Ile	Gly	Thr	Ser	Val	Leu	Gln	Val	Thr	Ala	Arg	Asp	Glu	Asp	Ser		
			1060						1065						1070		
Gly	Arg	Asp	Gly	Glu	Ile	Gln	Tyr	Ser	Ile	Arg	Asp	Gly	Ser	Gly	Leu		
			1075						1080						1085		
Gly	Arg	Phe	Ser	Ile	Asp	Asp	Glu	Ser	Gly	Val	Ile	Thr	Ala	Ala	Asp		
			1090						1095						1100		
Ile	Leu	Asp	Arg	Glu	Thr	Met	Gly	Ser	Tyr	Trp	Leu	Thr	Val	Tyr	Ala		
			1105						1110						1115	1120	
Thr	Asp	Arg	Gly	Val	Val	Pro	Leu	Tyr	Ser	Thr	Ile	Glu	Val	Tyr	Ile		
			1125						1130						1135		
Glu	Val	Glu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Leu	Thr	Ser	Glu	Pro	Ile		
			1140						1145								

1185					1190				1195				1200				
Lys	Thr	Gly	Leu	Ile	Thr	Thr	Thr	Ser	Arg	Lys	Leu	Asp	Arg	Glu	Gln		
				1205					1210					1215			
Gln	Ala	Glu	His	Phe	Leu	Glu	Val	Thr	Val	Thr	Asp	Gly	Gly	Pro	Ser		
				1220					1225					1230			
Pro	Lys	Gln	Ser	Thr	Ile	Trp	Val	Val	Val	Gln	Val	Leu	Asp	Glu	Asn		
				1235					1240					1245			
Asp	Asn	Lys	Pro	Gln	Phe	Pro	Glu	Lys	Val	Tyr	Gln	Ile	Lys	Leu	Pro		
				1250					1255					1260			
Glu	Arg	Asp	Arg	Lys	Lys	Arg	Gly	Glu	Pro	Ile	Tyr	Arg	Ala	Phe	Ala		
1265					1270					1275					1280		
Phe	Asp	Arg	Asp	Glu	Gly	Pro	Asn	Ala	Glu	Ile	Ser	Tyr	Ser	Ile	Val		
				1285					1290					1295			
Asp	Gly	Asn	Asp	Asp	Gly	Lys	Phe	Phe	Ile	Asp	Pro	Lys	Thr	Gly	Met		
				1300					1305					1310			
Val	Ser	Ser	Arg	Lys	Gln	Phe	Thr	Ala	Gly	Ser	Tyr	Asp	Ile	Leu	Thr		
				1315					1320					1325			
Ile	Lys	Ala	Val	Asp	Asn	Gly	Arg	Pro	Gln	Lys	Ser	Ser	Thr	Ala	Arg		
				1330					1335					1340			
Leu	His	Ile	Glu	Trp	Ile	Lys	Lys	Pro	Pro	Pro	Ser	Pro	Ile	Pro	Leu		
1345					1350					1355					1360		
Thr	Phe	Asp	Glu	Pro	Phe	Tyr	Asn	Phe	Thr	Val	Met	Glu	Ser	Asp	Arg		
				1365					1370					1375			
Val	Thr	Glu	Ile	Val	Gly	Val	Val	Ser	Val	Gln	Pro	Ala	Asn	Thr	Pro		
				1380					1385					1390			
Leu	Trp	Phe	Asp	Ile	Val	Gly	Gly	Asn	Phe	Asp	Ser	Ala	Phe	Asp	Ala		
				1395					1400					1405			
Glu	Lys	Gly	Val	Gly	Thr	Ile	Val	Ile	Ala	Lys	Pro	Leu	Asp	Ala	Glu		
				1410					1415					1420			
Gln	Arg	Ser	Ile	Tyr	Asn	Met	Ser	Val	Glu	Val	Thr	Asp	Gly	Thr	Asn		
1425					1430					1435					1440		
Val	Ala	Val	Thr	Gln	Val	Phe	Ile	Lys	Val	Leu	Asp	Asn	Asn	Asp	Asn		
				1445					1450					1455			
Gly	Pro	Glu	Phe	Ser	Gln	Pro	Asn	Tyr	Asp	Val	Thr	Ile	Ser	Glu	Asp		
				1460					1465					1470			
Val	Leu	Pro	Asp	Thr	Glu	Ile	Leu	Gln	Ile	Glu	Ala	Thr	Asp	Arg	Asp		
				1475					1480					1485			
Glu	Lys	His	Lys	Leu	Ser	Tyr	Thr	Val	His	Ser	Ser	Ile	Asp	Ser	Ile		
				1490					1495					1500			
Ser	Met	Arg	Lys	Phe	Arg	Ile	Asp	Pro	Ser	Thr	Gly	Val	Leu	Tyr	Thr		
1505					1510					1515					1520		
Ala	Glu	Arg	Leu	Asp	His	Glu	Ala	Gln	Asp	Lys	His	Ile	Leu	Asn	Ile		
				1525					1530					1535			
Met	Val	Arg	Asp	Gln	Glu	Phe	Pro	Tyr	Arg	Arg	Asn	Leu	Ala	Arg	Val		
				1540					1545					1550			
Ile	Val	Asn	Val	Glu	Asp	Ala	Asn	Asp	His	Ser	Pro	Tyr	Phe	Thr	Asn		
				1555					1560					1565			
Pro	Leu	Tyr	Glu	Ala	Ser	Val	Phe	Glu	Ser	Ala	Ala	Leu	Gly	Ser	Ala		
				1570					1575					1580			

1635	1640	1645
Pro Pro Met Ser Ala Thr	Ala Ile Val Arg Ile Ser Val Thr Met Ser	
1650	1655	1660
Asp Asn Ser His Pro Lys	Phe Ile His Lys Asp Tyr Gln Ala Glu Val	
1665	1670	1675
Asn Glu Asn Val Asp Ile	Gly Thr Ser Val Ile Leu Ile Ser Ala Ile	1680
1685	1690	1695
Ser Gln Ser Thr Leu Ile	Tyr Glu Val Lys Asp Gly Asp Ile Asn Gly	
1700	1705	1710
Ile Phe Thr Ile Asn Pro	Tyr Ser Gly Val Ile Thr Thr Gln Lys Ala	
1715	1720	1725
Leu Asp Tyr Glu Arg Thr	Ser Ser Tyr Gln Leu Ile Ile Gln Ala Thr	
1730	1735	1740
Asn Met Ala Gly Met Ala	Ser Asn Ala Thr Val Asn Ile Gln Ile Val	
1745	1750	1755
Asp Glu Asn Asp Asn Ala	Pro Val Phe Leu Phe Ser Gln Tyr Ser Gly	
1765	1770	1775
Ser Leu Ser Glu Ala Ala	Pro Ile Asn Ser Ile Val Arg Ser Leu Asp	
1780	1785	1790
Asn Ser Pro Leu Val Ile	Arg Ala Thr Asp Ala Asp Ser Asn Arg Asn	
1795	1800	1805
Ala Leu Leu Val Tyr Gln	Ile Val Glu Ser Thr Ala Lys Lys Phe Phe	
1810	1815	1820
Thr Val Asp Ser Ser Thr	Gly Ala Ile Arg Thr Ile Ala Asn Leu Asp	
1825	1830	1835
His Glu Thr Ile Ala His	Phe His Phe His Val His Val Arg Asp Ser	
1845	1850	1855
Gly Ser Pro Gln Leu Thr	Ala Glu Ser Pro Val Glu Val Asn Ile Glu	
1860	1865	1870
Val Thr Asp Val Asn Asp	Asn Pro Pro Val Phe Thr Gln Ala Val Phe	
1875	1880	1885
Glu Thr Ile Leu Leu Leu	Pro Thr Tyr Val Gly Val Glu Val Leu Lys	
1890	1895	1900
Val Ser Ala Thr Asp Pro	Asp Ser Glu Val Pro Pro Glu Leu Thr Tyr	
1905	1910	1915
Ser Leu Met Glu Gly Ser	Leu Asp His Phe Leu Ile Asp Ser Asn Ser	
1925	1930	1935
Gly Val Leu Thr Ile Lys	Asn Asn Asn Leu Ser Lys Asp His Tyr Met	
1940	1945	1950
Leu Ile Val Lys Val Ser	Asp Gly Lys Phe Tyr Ser Thr Ser Met Val	
1955	1960	1965
Thr Ile Met Val Lys Glu	Ala Met Asp Ser Gly Leu His Phe Thr Gln	
1970	1975	1980
Ser Phe Tyr Ser Thr Ser	Ile Ser Glu Asn Asn Thr Asn Ile Thr Lys	
1985	1990	1995
Val Ala Ile Val Asn Ala	Val Gly Asn Arg Leu Asn Glu Pro Leu Lys	
2005	2010	2015
Tyr Ser Ile Leu Asn Pro	Gly Asn Lys Phe Lys Ile Lys Ser Thr Ser	
2020	2025	2030
Gly Val Ile Gln Thr Thr	Gly Val Pro Phe Asp Arg Glu Glu Gln Glu	
2035	2040	2045
Leu Tyr Glu Leu Val Val	Glu Ala Ser Arg Glu Leu Asp His Leu Arg	
2050	2055	2060
Val Ala Arg Val Val Val	Arg Val Asn Ile Glu Asp Ile Asn Asp Asn	
2065	2070	2075
Ser Pro Val Phe Val Gly	Leu Pro Tyr Tyr Ala Ala Val Gln Val Asp	2080

2530	2535	2540
Leu Ile Asp Ser Asn Gly Gln Val Ile Thr Thr Glu Arg Leu Asp Arg		
2545	2550	2555
Glu Asn Pro Leu Glu Gly Asp Val Ser Ile Phe Val Arg Ala Leu Asp		2560
	2565	2570
Gly Gly Gly Arg Thr Thr Phe Cys Thr Val Arg Val Ile Val Val Asp		2575
	2580	2585
Glu Asn Asp Asn Ala Pro Gln Phe Met Thr Val Glu Tyr Arg Ala Ser		2590
	2595	2600
Val Arg Ala Asp Val Gly Arg Gly His Leu Val Thr Gln Val Gln Ala		2605
	2610	2615
Ile Asp Pro Asp Asp Gly Ala Asn Ser Arg Ile Thr Tyr Ser Leu Tyr		2620
2625	2630	2635
Ser Glu Ala Ser Val Ser Val Ala Asp Leu Leu Glu Ile Asp Pro Asp		2640
	2645	2650
Asn Gly Trp Met Val Thr Lys Gly Asn Phe Asn Gln Leu Lys Asn Thr		2655
	2660	2665
Val Leu Ser Phe Phe Val Lys Ala Val Asp Gly Gly Ile Pro Val Lys		2670
	2675	2680
His Ser Leu Ile Pro Val Tyr Ile His Val Leu Pro Pro Glu Thr Phe		2685
	2690	2695
Leu Pro Ser Phe Thr Gln Ser Gln Tyr Ser Phe Thr Ile Ala Glu Asp		2700
2705	2710	2715
Thr Ala Ile Gly Ser Thr Val Asp Thr Leu Arg Ile Leu Pro Ser Gln		2720
	2725	2730
Asn Val Trp Phe Ser Thr Val Asn Gly Glu Arg Pro Glu Asn Asn Lys		2735
	2740	2745
Gly Gly Val Phe Val Ile Glu Gln Glu Thr Gly Thr Ile Lys Leu Asp		2750
	2755	2760
Lys Arg Leu Asp Arg Glu Thr Ser Pro Ala Phe His Phe Lys Val Ala		2765
	2770	2775
Ala Thr Ile Pro Leu Asp Lys Val Asp Ile Val Phe Thr Val Asp Val		2780
2785	2790	2795
Asp Ile Lys Val Leu Asp Leu Asn Asp Asn Lys Pro Val Phe Glu Thr		2800
	2805	2810
Ser Ser Tyr Asp Thr Ile Ile Met Glu Gly Met Pro Val Gly Thr Lys		2815
	2820	2825
Leu Thr Gln Val Arg Ala Ile Asp Met Asp Trp Gly Ala Asn Gly Gln		2830
	2835	2840
Val Thr Tyr Ser Leu His Ser Asp Ser Gln Pro Glu Lys Val Met Glu		2845
	2850	2855
Ala Phe Asn Ile Asp Ser Asn Thr Gly Trp Ile Ser Thr Leu Lys Asp		2860
2865	2870	2875
Leu Asp His Glu Thr Asp Pro Thr Phe Thr Phe Ser Val Val Ala Ser		2880
	2885	2890
Asp Leu Gly Glu Ala Phe Ser Leu Ser Ser Thr Ala Leu Val Ser Val		2895
	2900	2905
Arg Val Thr Asp Ile Asn Asp Asn Ala Pro Val Phe Ala Gln Glu Val		2910
	2915	2920
Tyr Arg Gly Asn Val Lys Glu Ser Asp Pro Pro Gly Glu Val Val Ala		2925
	2930	2935
Val Leu Ser Thr Trp Asp Arg Asp Thr Ser Asp Val Asn Arg Gln Val		2940
2945	2950	2955
Ser Tyr His Ile Thr Gly Gly Asn Pro Arg Gly Arg Phe Ala Leu Gly		2960
	2965	2970
Leu Val Gln Ser Glu Trp Lys Val Tyr Val Lys Arg Pro Leu Asp Arg		2975

2980										2985										2990										
Glu	Glu	Gln	Asp	Ile	Tyr	Phe	Leu	Asn	Ile	Thr	Ala	Thr	Asp	Gly	Leu															
2995										3000										3005										
Phe	Val	Thr	Gln	Ala	Met	Val	Glu	Val	Ser	Val	Ser	Asp	Val	Asn	Asp															
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Asn	Ser	Pro	Val	Cys	Asp	Gln	Val	Ala	Tyr	Thr	Ala	Leu	Leu	Pro	Glu															
3025										3030										3035										
Asp	Ile	Pro	Ser	Asn	Lys	Ile	Ile	Leu	Lys	Val	Ser	Ala	Lys	Asp	Ala															
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Asp	Ile	Gly	Ser	Asn	Gly	Tyr	Ile	Arg	Tyr	Ser	Leu	Tyr	Gly	Ser	Gly															
3060										3065										3070										
Asn	Ser	Glu	Phe	Phe	Leu	Asp	Pro	Glu	Ser	Gly	Glu	Leu	Lys	Thr	Leu															
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Ala	Leu	Leu	Asp	Arg	Glu	Arg	Ile	Pro	Val	Tyr	Ser	Leu	Met	Ala	Lys															
3090										3095										3100										
Ala	Thr	Asp	Gly	Gly	Gly	Arg	Phe	Cys	Gln	Ser	Asn	Ile	His	Leu	Ile															
3105										3110										3115										
Leu	Glu	Asp	Val	Asn	Asp	Asn	Pro	Pro	Val	Phe	Ser	Ser	Asp	His	Tyr															
3125										3130										3135										
Asn	Thr	Cys	Val	Tyr	Glu	Asn	Thr	Ala	Thr	Lys	Ala	Leu	Leu	Thr	Arg															
3140										3145										3150										
Val	Gln	Ala	Val	Asp	Pro	Asp	Ile	Gly	Ile	Asn	Arg	Lys	Val	Val	Tyr															
3155										3160										3165										
Ser	Leu	Ala	Asp	Ser	Ala	Gly	Gly	Val	Phe	Ser	Ile	Asp	Ser	Ser	Ser															
3170										3175										3180										
Gly	Ile	Ile	Ile	Leu	Glu	Gln	Pro	Leu	Asp	Arg	Glu	Gln	Gln	Ser	Ser															
3185										3190										3195										
Tyr	Asn	Ile	Ser	Val	Arg	Ala	Thr	Asp	Gln	Ser	Pro	Gly	Gln	Ser	Leu															
3205										3210										3215										
Ser	Ser	Leu	Thr	Thr	Val	Thr	Ile	Thr	Val	Leu	Asp	Ile	Asn	Asp	Asn															
3220										3225										3230										
Pro	Pro	Val	Phe	Glu	Arg	Arg	Asp	Tyr	Leu	Val	Thr	Val	Pro	Glu	Asp															
3235										3240										3245										
Thr	Ser	Pro	Gly	Thr	Gln	Val	Leu	Ala	Val	Phe	Ala	Thr	Ser	Lys	Asp															
3250										3255										3260										
Ile	Gly	Thr	Asn	Ala	Glu	Ile	Thr	Tyr	Leu	Ile	Arg	Ser	Gly	Asn	Glu															
3265										3270										3275										
Gln	Gly	Lys	Phe	Lys	Ile	Asn	Pro	Lys	Thr	Gly	Gly	Ile	Ser	Val	Ser															
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Glu	Val	Leu	Asp	Tyr	Glu	Leu	Cys	Lys	Arg	Phe	Tyr	Leu	Val	Val	Glu															
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Ala	Lys	Asp	Gly	Gly	Thr	Pro	Ala	Leu	Ser	Ala	Val	Ala	Thr	Val	Asn															
3315										3320										3325										
Ile	Asn	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Lys	Phe	Ser	Gln	Asp															
3330										3335										3340										
Val	Tyr	Ser	Ala	Val	Ile	Ser	Glu	Asp	Ala	Leu	Val	Gly	Asp	Ser	Val															
3345										3350										3355										
Ile	Leu	Leu	Ile	Ala	Glu	Asp	Val	Asp	Ser	Gln	Pro	Asn	Gly	Gln	Ile															
3365										3370										3375										
His	Phe	Ser	Ile	Val	Asn	Gly	Asp	Arg	Asp	Asn	Glu	Phe	Thr	Val	Asp															
3380										3385										3390										
Pro	Val	Leu	Gly	Leu	Val	Lys	Val	Lys	Lys	Lys	Leu	Asp	Arg	Glu	Arg															
3395										3400										3405										
Val	Ser	Gly	Tyr	Ser	Leu	Leu	Val	Gln	Ala	Val	Asp	Ser	Gly	Ile	Pro															
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Ala	Met	Ser	Ser	Thr	Ala	Thr	Val	Asn	Ile	Asp	Ile	Ser	Asp	Val	Asn															

3425													3430													3435													3440			
Asp	Asn	Ser	Pro	Val	Phe	Thr	Pro	Ala	Asn	Tyr	Thr	Ala	Val	Ile	Gln																											
																3445													3450													3455
Glu	Asn	Lys	Pro	Val	Gly	Thr	Ser	Ile	Leu	Gln	Leu	Val	Val	Thr	Asp																											
																3460													3465													3470
Arg	Asp	Ser	Phe	His	Asn	Gly	Pro	Pro	Phe	Ser	Phe	Ser	Ile	Leu	Ser																											
																3475													3480													3485
Gly	Asn	Glu	Glu	Glu	Glu	Phe	Val	Leu	Asp	Pro	His	Gly	Ile	Leu	Arg																											
																3490													3495													3500
Ser	Ala	Val	Val	Phe	Gln	His	Thr	Glu	Ser	Leu	Glu	Tyr	Val	Leu	Cys																											
																3505													3510													3520
Val	Gln	Ala	Lys	Asp	Ser	Gly	Lys	Pro	Gln	Gln	Val	Ser	His	Thr	Tyr																											
																3525													3530													3535
Ile	Arg	Val	Arg	Val	Ile	Glu	Glu	Ser	Thr	His	Lys	Pro	Thr	Ala	Ile																											
																3540													3545													3550
Pro	Leu	Glu	Ile	Phe	Ile	Val	Thr	Met	Glu	Asp	Asp	Phe	Pro	Gly	Gly																											
																3555													3560													3565
Val	Ile	Gly	Lys	Ile	His	Ala	Thr	Asp	Gln	Asp	Met	Tyr	Asp	Val	Leu																											
																3570													3575													3580
Thr	Phe	Ala	Leu	Lys	Ser	Glu	Gln	Lys	Ser	Leu	Phe	Lys	Val	Asn	Ser																											
																3585													3590													3600
His	Asp	Gly	Lys	Ile	Ile	Ala	Leu	Gly	Gly	Leu	Asp	Ser	Gly	Lys	Tyr																											
																3605													3610													3615
Val	Leu	Asn	Val	Ser	Val	Ser	Asp	Gly	Arg	Phe	Gln	Val	Pro	Ile	Asp																											
																3620													3625													3630
Val	Val	Val	His	Val	Glu	Gln	Leu	Val	His	Glu	Met	Leu	Gln	Asn	Thr																											
																3635													3640													3645
Val	Thr	Ile	Arg	Phe	Glu	Asn	Val	Ser	Pro	Glu	Asp	Phe	Val	Gly	Leu																											
																3650													3655													3660
His	Met	His	Gly	Phe	Arg	Arg	Thr	Leu	Arg	Asn	Ala	Val	Leu	Thr	Gln																											
																3665													3670													3675
Lys	Gln	Asp	Ser	Leu	Arg	Ile	Ile	Ser	Ile	Gln	Pro	Val	Ala	Gly	Thr																											
																3685													3690													3695
Asn	Gln	Leu	Asp	Met	Leu	Phe	Ala	Val	Glu	Met	His	Ser	Ser	Glu	Phe																											
																3700													3705													3710
Tyr	Lys	Pro	Ala	Tyr	Leu	Ile	Gln	Lys	Leu	Ser	Asn	Ala	Arg	Arg	His																											
																3715													3720													3725
Leu	Glu	Asn	Ile	Met	Arg	Ile	Ser	Ala	Ile	Leu	Glu	Lys	Asn	Cys	Ser																											
																3730													3735													3740
Gly	Leu	Asp	Cys	Gln	Glu	Gln	His	Cys	Glu	Gln	Gly	Leu	Ser	Leu	Asp																											
																3745													3750													3755
Ser	His	Ala	Leu	Met	Thr	Tyr	Ser	Thr	Ala	Arg	Ile	Ser	Phe	Val	Cys																											
																3765													3770													3775
Pro	Arg	Phe	Tyr	Arg	Asn	Val	Arg	Cys	Thr	Cys	Asn	Gly	Gly	Leu	Cys																											
																3780													3785													3790
Pro	Gly	Ser	Asn	Asp	Pro	Cys	Val	Glu	Lys	Pro	Cys	Pro	Gly	Asp	Met																											
																3795													3800													3805
Gln	Cys	Val	Gly	Tyr	Glu	Ala	Ser	Arg	Arg	Pro	Phe	Leu	Cys	Gln	Cys																											
																3810													3815													3820
Pro	Pro	Gly	Lys	Leu</																																						

3875	3880	3885
Asp Gly Lys Leu Trp Phe Gln Leu Asp Cys Gly Ser Gly Pro Gly Ile		
3890	3895	3900
Leu Gly Ile Ser Gly Arg Ala Val Asn Asp Gly Ser Trp His Ser Val		
3905	3910	3915
Phe Leu Glu Leu Asn Arg Asn Phe Thr Ser Leu Ser Leu Asp Asp Ser		
3925	3930	3935
Tyr Val Glu Arg Arg Arg Ala Pro Leu Tyr Phe Gln Thr Leu Ser Thr		
3940	3945	3950
Glu Ser Ser Ile Tyr Phe Gly Ala Leu Val Gln Ala Asp Asn Ile Arg		
3955	3960	3965
Ser Leu Thr Asp Thr Arg Val Thr Gln Val Leu Ser Gly Phe Gln Gly		
3970	3975	3980
Cys Leu Asp Ser Val Ile Leu Asn Asn Asn Glu Leu Pro Leu Gln Asn		
3985	3990	3995
Lys Arg Ser Ser Phe Ala Glu Val Val Gly Leu Thr Glu Leu Lys Leu		
4005	4010	4015
Gly Cys Val Leu Tyr Pro Asp Ala Cys Lys Arg Ser Pro Cys Gln His		
4020	4025	4030
Gly Gly Ser Cys Thr Gly Leu Pro Ser Gly Gly Tyr Gln Cys Thr Cys		
4035	4040	4045
Leu Ser Gln Phe Thr Gly Arg Asn Cys Glu Ser Glu Ile Thr Ala Cys		
4050	4055	4060
Phe Pro Asn Pro Cys Arg Asn Gly Gly Ser Cys Asp Pro Ile Gly Asn		
4065	4070	4075
Thr Phe Ile Cys Asn Cys Lys Ala Gly Leu Thr Gly Val Thr Cys Glu		
4085	4090	4095
Glu Asp Ile Asn Glu Cys Glu Arg Glu Glu Cys Glu Asn Gly Gly Ser		
4100	4105	4110
Cys Val Asn Val Phe Gly Ser Phe Leu Cys Asn Cys Thr Pro Gly Tyr		
4115	4120	4125
Val Gly Gln Tyr Cys Gly Arg Pro Val Val Val Pro Asn Ile Gln Ala		
4130	4135	4140
Gly His Ser Tyr Val Gly Lys Glu Glu Leu Ile Gly Ile Ala Val Val		
4145	4150	4155
Leu Phe Val Ile Phe Ile Leu Val Val Leu Phe Ile Val Phe Arg Lys		
4165	4170	4175
Lys Val Phe Arg Lys Asn Tyr Ser Arg Asn Asn Ile Thr Leu Val Gln		
4180	4185	4190
Asp Pro Ala Thr Ala Ala Leu Leu Asn Lys Ser Asn Gly Ile Pro Phe		
4195	4200	4205
Arg Asn Leu Arg Gly Ser Gly Asp Gly Arg Asn Val Tyr Gln Glu Val		
4210	4215	4220
Gly Pro Pro Gln Val Pro Val Arg Pro Met Ala Tyr Thr Pro Cys Phe		
4225	4230	4235
Gln Ser Asp Ser Arg Ser Asn Leu Asp Lys Ile Val Asp Gly Leu Gly		
4245	4250	4255
Gly Glu His Gln Glu Met Thr Thr Phe His Pro Glu Ser Pro Arg Ile		
4260	4265	4270
Leu Thr Ala Arg Arg Gly Val Val Val Cys Ser Val Ala Pro Asn Leu		
4275	4280	4285
Pro Ala Val Ser Pro Cys Arg Ser Asp Cys Asp Ser Ile Arg Lys Asn		
4290	4295	4300
Gly Trp Asp Ala Gly Thr Glu Asn Lys Gly Val Asp Asp Pro Gly Glu		
4305	4310	4315
Val Thr Cys Phe Ala Gly Ser Asn Lys Gly Ser Asn Ser Glu Val Gln		

	4325		4330		4335
Ser Leu Ser Ser Phe Gln Ser Asp Ser Gly Asp Asp Asn Ala Ser Ile					
	4340		4345		4350
Val Thr Val Ile Gln Leu Val Asn Asn Val Val Asp Thr Ile Glu Asn					
	4355		4360		4365
Glu Val Ser Val Met Asp Gln Gly Gln Asn Tyr Asn Arg Ala Tyr His					
	4370		4375		4380
Trp Asp Thr Ser Asp Trp Met Pro Gly Ala Arg Leu Ser Asp Ile Glu					
	4385		4390		4395
					4400
Glu Val Pro Asn Tyr Glu Asn Gln Asp Gly Gly Ser Ala His Gln Gly					
	4405		4410		4415
Ser Thr Arg Glu Leu Glu Ser Asp Tyr Tyr Leu Gly Gly Tyr Asp Ile					
	4420		4425		4430
Asp Ser Glu Tyr Pro Pro Pro His Glu Glu Glu Phe Leu Ser Gln Asp					
	4435		4440		4445
Gln Leu Pro Pro Pro Leu Pro Glu Asp Phe Pro Asp Gln Tyr Glu Ala					
	4450		4455		4460
Leu Pro Pro Ser Gln Pro Val Ser Leu Ala Ser Thr Leu Ser Pro Asp					
	4465		4470		4475
					4480
Cys Arg Arg Arg Pro Gln Phe His Pro Ser Gln Tyr Leu Pro Pro His					
	4485		4490		4495
Pro Phe Pro Asn Glu Thr Asp Leu Val Gly Pro Pro Ala Ser Cys Glu					
	4500		4505		4510
Phe Ser Thr Phe Ala Val Ser Met Asn Gln Gly Thr Glu Pro Thr Gly					
	4515		4520		4525
Pro Ala Asp Ser Val Ser Leu Ser Leu His Asn Ser Arg Gly Thr Ser					
	4530		4535		4540
Ser Ser Asp Val Ser Ala Asn Cys Gly Phe Asp Asp Ser Glu Val Ala					
	4545		4550		4555
					4560
Met Ser Asp Tyr Glu Ser Val Gly Glu Leu Ser Leu Ala Ser Leu His					
	4565		4570		4575
Ile Pro Phe Val Glu Thr Gln His Gln Thr Gln Val					
	4580		4585		